WHAT IS CLAIMED IS:

1. An apparatus for controlling load balance of multi-access points in a wireless local area network system, the apparatus comprising:

a plurality of wireless local area network terminals having wireless local area network interfaces and receiving a wireless local area network service;

a plurality of access points providing the wireless local area network service to the wireless local area network terminals, periodically transmitting load state information, and suppressing an increase of load when a load suppressing signal is received; and

a management system comparatively evaluating load states of each access point by receiving the load state information from the access points, and transmitting a load increase suppressing signal to access points whose load values are more than a threshold value, when there are access points whose load values are more than the threshold value and other access points around the access points whose load values are more than the threshold value are in idle state.

2. The apparatus of claim 1, wherein the load state information transmitted to the management system from the wireless local area network access points includes the number of accessed wireless local area network terminals, the number of wireless local area network terminals recently generating data traffic, the number of data frames, and data frame length.

3. The apparatus of claim 1, wherein the load increase suppressing operation, performed by

the wireless local area network access points, transmits an authentication failure message according to an authentication request of the wireless local area network terminals attempting the access.

4. The apparatus of claim 1, wherein the load increase suppressing operation, performed by the wireless local area network access points, deletes network node addresses of the wireless local area network terminals by basic service set tables and intercepts the access of the wireless local area network terminals, when the wireless local area network terminals, which do not continuously generate data traffic and keep accessing, generate the data traffic.

5. The apparatus of claim 1, wherein when transmitting the authentication failure message according to the authentication request of the wireless local area network terminals, the management system transmits information on other neighboring access points in idle state to the access points whose load value exceed the threshold value, the access points transmit the information on the other neighboring access points in idle state to the wireless local area network terminals, and the wireless local area network terminals receive the information on the other neighboring access points in idle state from the access points and attempt access to the other access points in idle state.

6. The apparatus of claim 3, wherein when transmitting the authentication failure message according to the authentication request of the wireless local area network terminals, the management system transmits information on other neighboring access points in idle state to the access points whose load value exceed the threshold value, the access points transmit the information on the other

neighboring access points in idle state to the wireless local area network terminals, and the wireless local area network terminals receive the information on the other neighboring access points in idle state from the access points and attempt access to the other access points in idle state.

7. The apparatus of claim 1, wherein when transmitting the authentication failure message according to the authentication request of the wireless local area network terminals, the management system transmits information on the access-attempting wireless local area network terminals to the other idle access points, and the idle access points attempt access to the wireless local area network terminals.

8. The apparatus of claim 3, wherein when transmitting the authentication failure message according to the authentication request of the wireless local area network terminals, the management system transmits information on the access-attempting wireless local area network terminals to the other idle access points, and the idle access points attempt access to the wireless local area network terminals.

9. The apparatus of claim 1, wherein when intercepting the access of the wireless local area network terminals by deleting the network node addresses of the wireless local area network terminals, the management system transmits the information on other neighboring access points in idle state to the access points whose load values exceed the threshold value, the access points transmit the information on the other neighboring access points in idle state to the wireless local area

network terminals, and the wireless local area network terminals receive the information on the other idle access points from the access points and attempt access to the other idle access points.

10. The apparatus of claim 4, wherein when intercepting the access of the wireless local area network terminals by deleting the network node addresses of the wireless local area network terminals, the management system transmits the information on other neighboring access points in idle state to the access points whose load values exceed the threshold value, the access points transmit the information on the other neighboring access points in idle state to the wireless local area network terminals, and the wireless local area network terminals receive the information on the other idle access points from the access points and attempt access to the other idle access points.

11. The apparatus of claim 1, wherein when intercepting the access of the wireless local area network terminals by deleting the network node addresses of the wireless local area network terminals, the management system transmits the information on the access-attempting wireless local area network terminals to the other idle access points, and the idle access points attempt access to the wireless local area network terminals.

12. The apparatus of claim 4, wherein when intercepting the access of the wireless local area network terminals by deleting the network node addresses of the wireless local area network terminals, the management system transmits the information on the access-attempting wireless local area network terminals to the other idle access points, and the idle access points attempt access to

the wireless local area network terminals.

13. A method of controlling load balance of multi-access points in a wireless local area network system including a plurality of wireless local area network terminals and a plurality of access points, the method comprising:

periodically monitoring load states of the access points;

transmitting a load increase suppressing signal to access points whose load values exceed a threshold value, when there are the access points whose load values exceed the threshold value and there are idle access points around the access points while monitoring the load states of the access points; and

suppressing an increase of load in the corresponding access points according to the transmitted load increase suppressing signal.

14. The method of claim 13, wherein load state information includes the number of accessed wireless local area network terminals, the number of wireless local area network terminals recently generating data traffic, the number of data frames, and data frame length.

15. The method of claim 13, wherein the step of periodically monitoring load states of the access points comprises the sub-steps of:

periodically receiving the load state information from the access points;

detecting timed changing values of load values by using the load state information

periodically received from the access points;

transmitting a signal for requesting to transmit the load state information to access points whose timed changing values are more than a predetermined value, when the timed changing values of the detected load values are more than the predetermined value;

generating load state information messages including the load state information by the access points receiving the signal for requesting to transmit the load state information; and

monitoring load states of the access points according to the load state information messages generated from the access points.

16. The method of claim 13, wherein the step of transmitting the load increase suppressing signal comprises the sub-steps of:

deciding whether there are access points whose load values exceed the threshold value based on the load state information received from the multi-access points;

repeating from the step of periodically monitoring load states of the access points when there are no access points whose load values exceed the threshold value after deciding;

deciding whether there are neighboring idle access points when there are access points whose load values exceed the threshold value after deciding;

repeating from the step of periodically monitoring load states of the access points when there are no neighboring idle access points after deciding; and

transmitting the load increase suppressing signal to the access points whose load values exceed the threshold value when there are neighboring idle access points after deciding.

17. The method of claim 13, wherein the step of suppressing the increase of load in the corresponding access points comprises the sub-step of transmitting an authentication response failure message for access-attempting wireless local area network terminals according to the control signal for suppressing the increase of load.

18. The method of claim 13, wherein the step of suppressing the increase of load in the corresponding access points comprises the sub-step of deleting the network node addresses of the wireless local area network terminals from basic service set tables and intercepting access of the wireless local area network terminals, when the wireless local area network terminals, which do not continuously generate data traffic and keep accessing according to the control signal for suppressing the increase of load, generate the data traffic.

19. The method of claim 17, wherein the step of transmitting the authentication response failure message for the access-attempting wireless local area network terminals comprises the sub-steps of:

transmitting information on the neighboring idle access points to the access points whose load values exceed the threshold value;

transmitting the information on the neighboring idle access points to the wireless local area network terminals by the access points; and

attempting access to the neighboring idle access points, and setting the access by the wireless

local area network terminals.

20. The method of claim 17, wherein the step of transmitting the authentication response failure message for the access-attempting wireless local area network terminals comprises the sub-steps of:

transmitting information on the access-attempting wireless local area network terminals to the neighboring idle access points; and

attempting access to the wireless local area network terminals, and setting the access by the idle access points.

21. The method of claim 18, wherein the step of intercepting the access of the wireless local area network terminals comprises the sub-steps of:

transmitting the information on the neighboring idle access points to the access points whose load values exceed the threshold value;

transmitting the information on the neighboring idle access points to the wireless local area network terminals by the access points; and

attempting access to the neighboring idle access points, and setting the access by the wireless local area network terminals.

22. The method of claim 18, wherein the step of intercepting the access of the wireless local area network terminals comprises the sub-steps of:

transmitting information on the wireless local area network terminals generating the data traffic to the idle access points around the access points whose load values exceed the threshold value; and

attempting access to the wireless local area network terminals, and setting the access by the idle access points.

23. An apparatus, comprising:

a plurality of wireless network terminals having wireless network interfaces and receiving a wireless network service;

a plurality of access points providing the wireless network service to the wireless network terminals, periodically transmitting load state information, and suppressing an increase of load when a load suppressing signal is received; and

a first unit comparatively evaluating load states of each access point by receiving the load state information from the access points, and transmitting a load increase suppressing signal to access points whose load values are more than a threshold value, when there are access points whose load values are more than the threshold value and other access points around the access points whose load values are more than the threshold value are in an idle state.

24. The apparatus of claim 23, wherein the load state information transmitted to the first unit from the wireless network access points includes the number of accessed wireless network terminals, the number of wireless network terminals recently generating data traffic, the number of data frames,

and data frame length.

25. The apparatus of claim 24, wherein the load increase suppressing operation, performed by the wireless network access points, transmits an authentication failure message according to an authentication request of the wireless network terminals attempting the access.

26. The apparatus of claim 25, wherein the load increase suppressing operation, performed by the wireless network access points, deletes network node addresses of the wireless network terminals by basic service set tables and intercepts the access of the wireless network terminals, when the wireless network terminals, which do not continuously generate data traffic and keep accessing, generate the data traffic.

27. A computer-readable medium having computer-executable instructions for performing a method of controlling load balance of multi-access points in a wireless local area network system including a plurality of wireless local area network terminals and a plurality of access points, the method comprising:

periodically monitoring load states of the access points;

transmitting a load increase suppressing signal to access points whose load values exceed a threshold value, when there are the access points whose load values exceed the threshold value and there are idle access points around the access points while monitoring the load states of the access points; and

suppressing an increase of load in the corresponding access points according to the transmitted load increase suppressing signal.

28. The computer-readable medium having computer-executable instructions for performing the method of claim 27, wherein load state information includes the number of accessed wireless local area network terminals, the number of wireless local area network terminals at certain time generating data traffic, the number of data frames, and data frame length.

29. A computer-readable medium having stored thereon a data structure, comprising:

a first field containing data representing periodically monitoring load states of the access points;

a second field containing data representing transmitting a load increase suppressing signal to access points whose load values exceed a threshold value, when there are the access points whose load values exceed the threshold value and there are idle access points around the access points while monitoring the load states of the access points, with the second field of transmitting the load increase suppressing signal comprising the sub-fields of:

a first sub-field containing data representing deciding whether there are access points whose load values exceed the threshold value based on the load state information received from the multi-access points;

a second sub-field containing data representing repeating from the first field of periodically monitoring load states of the access points when there are no access points whose load

values exceed the threshold value after deciding;

a third sub-field containing data representing deciding whether there are neighboring idle access points when there are access points whose load values exceed the threshold value after deciding;

a fourth sub-field containing data representing repeating from the first field of periodically monitoring load states of the access points when there are no neighboring idle access points after deciding; and

a third field containing data representing transmitting the load increase suppressing signal to the access points whose load values exceed the threshold value when there are neighboring idle access points after deciding; and

a fourth field containing data representing suppressing an increase of load in the corresponding access points according to the transmitted load increase suppressing signal.